

Documentation of the Blennioid Fish *Parablennius thysanius* from the Hawaiian Islands¹

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ABSTRACT: Although *Parablennius* has been known to occur in the Hawaiian Islands (Oahu) since about 1971–1972, it was not possible until recently to identify the species. The presence of adults on the fouling of buoys and pilings at Oahu, and larvae in the plankton, are the only records of *P. thysanius* east of the Philippines.

DURING FEBRUARY 1974, I was shown some live blennioid fishes collected in Kaneohe Bay, Oahu, that were being maintained in an aquarium at the Hawaii Institute of Marine Biology (HIMBL). Using the currently prevailing taxonomy, I was able to identify the fishes only as belonging in the genus *Blennius* (Tribe Blenniini), which was then unreported from Hawaii. According to J. M. Leis (in litt., 5 July 1990), Watson and Leis (1974: 58 [reference not seen by me]) mentioned a larval blennioid they called type 5, which is the larva of the species I saw in 1974, and which, according to Watson and Leis, was the second most abundant blennioid larva in Kaneohe Bay during 1971–1972. Also, according to Leis (in litt.), Watson (1974 [reference not seen by me]) reported on the vertical distribution of these larvae, which Watson identified as *Blennius* sp., possibly based on my identification. Watson stated, “The genus *Blennius* has not been reported from Hawaiian water; this species may be a recent import.”

In 1978, William Watson, formerly at HIMBL, but then working elsewhere, sent me for identification some preserved specimens of the species I had seen at HIMBL. These had been collected in Kaneohe Bay in November 1973 and March 1974 and were in his personal possession (Watson, in litt., 26 June 1978). I tentatively identified the specimens as a species of *Pictiblennius*, based on Bath's (1977) generic revision of the Blenniini, noting

that the correct specific name would have to await a revision of *Pictiblennius* (Springer, in litt., 18 July 1978). I returned the specimens to Waston. Soon after, Miller et al. (1979: 177) listed, without comment, the presence of *Blennius* in Hawaii, possibly based on my initial identification.

Bath (1981) synonymized *Pictiblennius* under *Parablennius*, and Springer (1982: 18), unaware of the work of Watson (1974) and Miller et al. (1979), reported, for what he thought was the first time, that an unidentified species of *Parablennius* occurred in Hawaii. Springer noted that this occurrence represented the only record of a species of Blenniini from the Pacific lithospheric plate (an example of a Hawaiian exception—type distribution pattern [Springer 1982]).

Watson in Leis and Rennis (1983: 189), unaware of Bath's (1981) and Springer's (1982) usage of *Parablennius*, illustrated the larvae of “*Pictiblennius* sp.” from Hawaii, undoubtedly based on my 1978 identification. Leis and Trnski (1989: 362) noted that Watson's *Pictiblennius* should be changed to *Parablennius*.

Bock and Zander (1986) formally split the Tribe Blenniini into the Blenniini and *Parablenniini* (Smith-Vaniz [1976] earlier termed these two entities Blenniini and “Blenniini,” respectively). The distribution of the *Parablenniini* is essentially identical to that of the original Blenniini (tropical to temperate coasts on continental lithospheric plates and the Hawaiian Islands). The present Blenniini are known only from the Mediterranean–eastern Atlantic.

In March 1990, George S. Losey, Jr., col-

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lected numerous specimens of *Parablennius* from the fouling on buoys floating in about 10 m of water and about 300 m from shore in South Bay, Kaneohe Bay, Oahu. Seventeen of these specimens, 13 males and four females, 27.4–51.1 mm standard length [SL], are cataloged as USNM 308501. Another 15 specimens [not seen by me], 30–46 mm SL, from the same collection, are cataloged at the Bishop Museum [BPBM 33935]. He informed me that the species is extremely common on the buoys. He has also seen it less commonly on the fouling of wharf pilings and has heard reports that it also occurs in Pearl Harbor (noted also by Watson [in litt., 26 June 1978]). I have identified the specimens as *Parablennius thysanius* (Jordan & Seale) (Figure 1), based on comparison with the holotype of *Blennius thysanius* and on Bath's (1989) revision of the Indo-Pacific species of *Parablennius*.

Bath (1989:330, fig. 47) reported that *Parablennius thysanius* was known from only a relatively few specimens from Pakistan, Sri Lanka, Oman, Thailand, and the Philippines. A distance of ca. 8500 km separates the Oahu population from the nearest (Philippines) population of the species.

Based on minor differences in color pattern, body proportions, and meristics, Bath re-

ported that his material seemed to comprise three populations, but that the material was insufficient for recognizing the populations taxonomically. I agree with his observations. The Hawaiian specimens also exhibit minor differences in meristics from specimens from other localities. All 17 of the Hawaiian specimens I examined, for example, have 23 caudal vertebrae, whereas specimens from the Philippines and Pakistan have from 22 (rarely) to 24 (commonly) caudal vertebrae (Table 1). In general, I have found that broadly distributed blennioid species exhibit considerable inter-population variation, but that overlap in characters is so extensive that nomenclatural recognition is rarely warranted.

The distribution of *Parablennius thysanius* is marked by large gaps between known localities of occurrence. Whether these circumstances are indicative of the species' distribution or are collecting artifacts is undecided. The habitat of *P. thysanius* in the Hawaiian Islands (fouling on buoys and pilings) causes me, like Watson (1974), to wonder if the species was, perhaps, introduced to Hawaii, perhaps from some area to the west by having been transported along with the fouling on a ship's hull.

It is relevant to note here that Bennett (1828:34–35) described *Blennius sordidus*

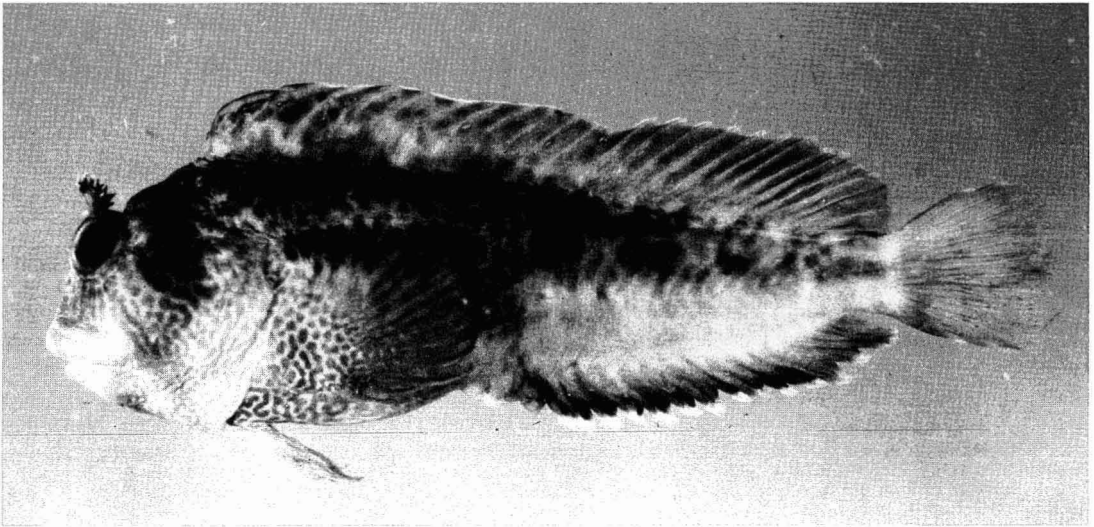


FIGURE 1. *Parablennius thysanius*, BPBM 33935, male, 41 mm SL, Kaneohe Bay, Oahu, Hawaii (produced from a color photograph taken by J. E. Randall).

TABLE 1

FREQUENCY DISTRIBUTIONS FOR CERTAIN MERISTIC CHARACTERS OF SPECIMENS OF *Parablennius thysanius* FROM VARIOUS LOCALITIES

LOCALITY	TOTAL DORSAL-FIN ELEMENTS			SEGMENTED ANAL-FIN RAYS			CAUDAL VERTEBRAE		
	25	26	27	15	16	17	22	23	24
Oahu, Hawaii	—	10	7	—	15	2	—	17	—
Philippines*	3	17	10	2	22	6	1	20	9
Pakistan, India, Sri Lanka*	—	3	13	—	7	9	—	7	9

*From Bath (1989).

(= *Hypsoblennius sordidus*) from the Hawaiian Islands, and Günther (1861:226) described *Blennius brevipinnis* (= *Hypsoblennius brevipinnis*) from the Hawaiian Islands and the west coast of Central America. Both species are in the Parablenniini and otherwise restricted to the eastern Pacific, and neither has been collected subsequently from the Hawaiian Islands. Strasburg (1956:243) did not believe either species occurred in the Hawaiian Islands, and Springer (1967) gave reasons for believing that the type locality of *H. sordidus* was either erroneous or based on a specimen that had been introduced.

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